

*Mean Places of Comparison Stars.*

	Star's Name.	R.A. 1885 <sup>o</sup> .			N.P.D. 1885 <sup>o</sup> .	Authority.
		h	m	s		
<i>a</i>	W.B. (2) XXIII. 1096	23	53	50.46	69° 20' 57".2	Weisse's Bessel
<i>b</i>	Lalande 46906	23	50	5 58	69 28 29.6	Lalande
<i>c</i>	Arg. Z. + 20° No. 5397	23	50	12.64	69 17 29.6	Bonn. Obs. vol. vi.
<i>d</i>	Arg. Z. + 20° No. 5401	23	51	1.69	69 30 16.8	„ „ „ iv.
<i>e</i>	Arg. Z. + 5° No. 566	3	51	37.67	84 9 8.6	„ „ „ iii.
<i>f</i>	Arg. Z. + 5° No. 572	3	52	24.86	84 11 16.3	„ „ „ iii.
<i>g</i>	W.B. III. 344	3	21	27.95	82 39 3.0	Schjellerup.

*Notes.*

- Dec. 24 (*d*) Comet very faint; no nucleus.  
 27 (*d*) Comet faint; circular, with very faint nucleus.  
 15 (*e*) Small round object; no nucleus or tail.  
 27 (*e*) Faint, with nucleus.

The observations are corrected for parallax and refraction. The initials H.T., A.D., and H. are those of Mr. Turner, Mr. Downing, and Mr. Hollis respectively.

*Royal Observatory, Greenwich:*  
 1886, January 8.

*Spectroscopic Results for the Motions of Stars in the Line of Sight, obtained at the Royal Observatory, Greenwich, in the year 1885.*  
 No. IX.

*(Communicated by the Astronomer Royal.)*

The results here given are in continuation of those printed in the *Monthly Notices*, vol. xxxvi. p. 318, vol. xxxvii. p. 22, vol. xxxviii. p. 493, vol. xli. p. 109, vol. xlii. p. 230, vol. xliii. p. 81, vol. xlv. p. 89, and vol. xlv. p. 330. The observations were made with the "half-prism" spectroscope, one "half-prism" with a dispersion of about 18½° from A to H being used, except in a few cases of bright stars mentioned in the Remarks, where a train of two "half-prisms," with a dispersion of 80° from A to H, was used. An eyepiece with a magnifying power of 14 was employed throughout.

The cylindrical lens has always been used in front of the slit as in the observations made previously to 1881. A slip of metal coated with Balmain's luminous paint, inserted immediately behind the measuring pointer, has been frequently employed to give a phosphorescent illumination of the field.

The observations of the Moon and of the Sun have been made as a check on the general accuracy of the results.

*Motions of Stars in the Line of Sight, in Miles per Second, observed with the Half-prism Spectroscope.*

(+ denotes Recession; - Approach.)

The initials M. and N. are those of Mr. Maunder and Mr. Nash respectively.

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estimd.	Remarks.
<i><math>\alpha</math> Andromedæ.</i>					
Nov. 5	M	2	F	+ 8.7 - 23.3 - 29.5	Definition poor.
17	M	2	F	+ 11.6 - 38.7 - 49.8	Spectrum steady; definition good.
28	M	2	F	+ 13.8 - 35.1 - 25.7	
Dec. 1	N	2	F	+ 14.3 - 29.8 - 30.7	Slit too narrow for satisfactory work.
8	N	2	F	+ 15.4 - 49.3 - 47.8	Spectrum bright and steady; star-line distinct.
15	N	2	F	+ 16.2 - 17.2 - 16.2	Spectrum bright and steady; star-line faint.
<i><math>\gamma</math> Pegasi.</i>					
Nov. 17	M	2	F	+ 13.7 - 29.6 - 38.5	Spectrum tremulous and faint.
Dec. 8	N	2	F	+ 17.3 - 35.9 - 35.6	
15	N	2	F	+ 18.0 - 29.2 - 30.2	
<i><math>\alpha</math> Cassiopeiæ.</i>					
Oct. 5	M	2	$b_1$	- 5.0 + 55.9 + 54.4	Spectrum very tremulous; definition bad.
<i><math>\beta</math> Arietis.</i>					
Nov. 17	M	2	F	+ 7.4 - 46.5 - 49.8	Star-line diffused, and very broad.
Dec. 1	N	2	F	+ 11.4 - 50.1 - 57.2	Spectrum faint; measures difficult.
8	N	2	F	+ 13.2 - 31.1 - 31.8	
15	N	2	F	+ 14.7 - 30.0 - 30.0	Spectrum faint; measures difficult.
<i><math>\alpha</math> Arietis.</i>					
Nov. 17	M	2	F	+ 6.3 - 8.9 - 14.8	Star-line very faint, and seen with great difficulty.
Dec. 1	N	2	F	+ 10.4 - 35.5 - 42.5	Measures difficult.
	N	2	F	+ 12.2 - 38.2 - 38.6	
15	N	2	F	+ 13.9 - 6.6 - 9.4	
<i><math>\gamma</math> Persei.</i>					
Nov. 17	M	2	F	- 0.7 + 67.1 + 60.8	Spectrum faint: star-line faint and diffused.

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas.    Estimd.		Remarks.
<i>β Persei.</i>						
Feb. 7	M	2 F	+ 17.4	-45.1	-57.3	Measures difficult and rough.
Nov. 17	M	2 F	+ 0.4	-39.5	-49.9	Spectrum bright and steady; definition good.
Dec. 8	N	2 F	+ 6.7	-19.7	-20.6	
<i>α Persei.</i>						
Feb. 7	M	2 F	+ 16.0	-74.8	-87.2	Spectrum and star-line faint; measures rough.
<i>Aldebaran.</i>						
Feb. 3	M	2 F	+ 17.3	+ 7.2	+ 13.1	Star-line faint, but well defined.
5	M	3 F	+ 17.6	+ 7.7	+ 10.3	Definition variable.
7	M	2 F	+ 17.8	+ 36.3	+ 42.0	Star-line faint, and only seen by glimpses.
19	M	2 F	+ 18.5	+ 27.4	+ 16.5	Spectrum and star-line faint.
21	M	2 F	+ 18.6	+ 33.5	+ 26.1	Spectrum and star-line faint, observation rough.
23	M	2 <i>b</i> <sub>1</sub>	+ 18.6	+ 20.8	+ 14.0	Spectrum very unsteady.
25	M	2 <i>b</i> <sub>1</sub>	+ 18.6	+ 18.6	+ 11.0	Spectrum bright; star-line well seen.
Mar. 10	N	2 <i>b</i> <sub>1</sub>	+ 18.1	+ 41.4	+ 39.1	Spectrum unsteady; <i>b</i> lines sharp and distinct.
12	N	1 <i>b</i> <sub>1</sub>	+ 17.9	+ 14.8	+ 17.4	Spectrum faint and tremulous; measures rough.
Nov. 5	M	2 F	- 7.7	+ 31.9	+ 38.5	Definition fair; measures considered good.
28	M	2 F	- 0.4	+ 28.7	+ 19.6	
Dec. 1	N	2 F	+ 0.6	(-20.5)	(-21.2)	Star-line very faint and indistinct.
8	N	2 F	+ 2.9	+ 26.6	+ 26.8	Spectrum tremulous; wind high.
15	N	2 F	+ 5.2	+ 30.9	+ 27.8	
<i>Capella.</i>						
Feb. 7	M	4 F	+ 14.9	+ 2.7	+ 5.0	Spectrum bright and steady.
23	M	2 <i>b</i> <sub>1</sub>	+ 16.7	+ 19.4	+ 16.8	Spectrum bright, but very unsteady; wind high.
25	M	2 <i>b</i> <sub>1</sub>	+ 16.8	+ 13.6	+ 7.5	Spectrum very unsteady; star-lines very faint.
Mar. 10	N	2 <i>b</i> <sub>1</sub>	+ 17.2	- 0.1	- 5.0	Star-line very faint.
12	N	3 <i>b</i> <sub>1</sub>	+ 17.1	+ 31.2	+ 32.3	Spectrum bright and fairly steady.
Nov. 5	M	2 F	- 10.3	+ 28.6	+ 31.0	Definition very good; star-line well seen.

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estim.	Remarks.
<i>Rigel.</i>					
Feb. 5	M	2	F	+14.3 +10.6 + 8.9	Star-line fairly well seen.
7	M	6	F	+14.5 +13.2 - 8.0	Individual measures discordant.
21	M	2	F	+15.7 +28.5 +21.6	Spectrum very faint; measures rough.
Nov. 5	M	3	F	- 8.3 (-27.2) (-26.9)	Star-line exceedingly difficult to see. Measures rough.
28	M	2	F	- 2.3 +26.9 +21.5	
Dec. 8	N	2	F	+ 0.5 +23.5 +23.8	Wind very troublesome.
15	N	2	F	+ 2.5 +23.5 +25.0	
<i><math>\gamma</math> Orionis.</i>					
Feb. 5	M	2	F	+15.3 -17.3 -20.0	Spectrum bright and fairly steady.
7	M	4	F	+15.7 -25.9 -31.4	Star-line fairly well seen.
Nov. 5	M	2	F	-10.4 + 6.9 + 5.8	Star-line faint; observation difficult.
Dec. 15	N	2	F	+ 1.6 + 1.9 + 3.6	
<i><math>\beta</math> Tauri.</i>					
Feb. 5	M	4	F	+15.6 -35.1 -39.6	Star-line diffused and difficult to bisect.
7	M	3	F	+16.0 (-39.8) (-51.1)	Sky cloudy: measures uncertain.
Nov. 5	M	2	F	-11.2 -26.8 -27.3	Definition fair; measures considered good.
Dec. 8	N	2	F	- 1.2 -37.0 -39.4	
<i><math>\delta</math> Orionis.</i>					
Feb. 5	M	4	F	+14.4 -23.1 -26.0	Observation very difficult.
<i><math>\epsilon</math> Orionis.</i>					
Feb. 5	M	2	F	+14.2 -17.7 -16.6	Spectrum fairly bright and steady.
<i><math>\zeta</math> Orionis.</i>					
Feb. 5	M	2	F	+13.9 -23.8 -25.5	Star-line fairly well seen by glimpses.
<i><math>\kappa</math> Orionis.</i>					
Feb. 5	M	4	F	+12.6 -24.8 -23.1	Star-line distinctly seen, but difficult to bisect.
<i><math>\alpha</math> Orionis.</i>					
Feb. 23	M	2	$b_1$	+16.7 +21.4 +22.4	Star-line occasionally seen distinctly isolated from the dark band in which it lies.
25	M	2	$b_1$	+16.9 +12.6 + 4.5	Spectrum very tremulous

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estimd.	Remarks.
<i>β Aurigæ.</i>					
Feb. 7	M	2 F	+ 13.6	(-49.8) (-56.3)	Sky cloudy; measures uncertain.
<i>γ Geminorum.</i>					
Feb. 5	M	4 F	+ 12.0	-93.7 -79.4	Very large displacement towards the blue; estimations rough.
<i>Sirius.</i>					
Feb. 3	M	6 F	+ 7.9	-13.4 -15.2	Star-line exceedingly difficult to bisect; slight displacement towards the blue.
5	M	4 F	+ 8.3	-42.5 -47.1	Displacement towards the blue very marked.
7	M	3 F	+ 8.7	(-71.3) (-50.4)	Sky cloudy; measures uncertain.
Mar. 14	M	4 F	+ 13.6	-21.4 -23.4	Slight displacement towards the blue.
14	M	4 F	+ 13.6	-21.9 -25.9	Two-prism train employed.
27	N	2 F	+ 14.1	-10.3 -8.9	Measures difficult.
Nov. 5	M	6 F	-12.3	-20.3 -24.9	Spectrum very bright, but tremulous; star-line very broad and ill-defined; star-line suspected not to be symmetrical.
28	M	6 F	-8.5	-8.7 -7.2	Small displacement towards the blue.
Dec. 15	N	2 F	-4.6	-18.4 -16.8	
<i>Castor.</i>					
Feb. 3	M	2 F	+ 8.4	-21.8 -25.0	Star-line very ill defined.
Mar. 14	M	4 F	+ 16.7	-38.9 -41.1	Unmistakable displacement towards the blue.
27	N	3 F	+ 17.8	-9.9 -11.6	Star-line broad and diffused.
<i>Procyon.</i>					
Feb. 3	M	2 F	+ 6.6	-12.6 -17.6	Star-line fairly well seen.
5	M	4 F	+ 7.2	-0.1 -1.4	Spectrum bright and steady.
Mar. 14	M	4 F	+ 15.5	-19.5 -20.2	Star-line unusually well defined.
27	N	2 F	+ 17.0	-33.9 -33.6	Spectrum tremulous.
Dec. 15	N	4 F	-9.1	-16.8 -15.3	
<i>Pollux.</i>					
Feb. 3	M	2 F	+ 7.3	-35.2 -34.9	Star-line very faint and difficult to see.
23	M	2 <i>b</i> <sub>1</sub>	+ 12.7	-17.2 -18.3	Star-line exceedingly faint.

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estimd.		Remarks.
Feb. 25	M	2 $b_1$	+13.1	-33.4	-40.0	Spectrum very unsteady; star-line fairly dark and distinct.
Mar. 11	M	2 $b_1$	+15.9	-25.9	-30.2	Spectrum tremulous; star- line fairly well seen.
14	M	4 F	+16.3	-25.6	-24.7	Star-line faint.
Apr. 21	M	2 $b_1$	+17.8	-23.3	-27.5	Spectrum bright, but very tremulous.
<i><math>\alpha</math> Hydræ.</i>						
Feb. 23	M	2 $b_1$	+3.0	+8.8	+8.2	Star-line seen with the greatest difficulty; mea- sures very rough.
Mar. 11	M	2 $b_1$	+7.5	+5.5	+6.8	Spectrum faint and tremu- lous; definition fair.
<i>Regulus.</i>						
Mar. 14	M	2 F	+8.3	-15.7	-20.2	Star-line fairly well defined.
Apr. 18	M	2 F	+15.9	+6.9	+3.0	Definition exceedingly bad.
<i><math>\gamma'</math> Leonis.</i>						
Mar. 11	M	2 $b_1$	+7.4	+23.0	+23.2	Star-line faint, but seen well by glimpses.
<i><math>\alpha</math> Ursæ Majoris.</i>						
Aug. 14	M	1 F	-1.7	-3.4	-5.7	Spectrum faint: definition poor.
<i><math>\beta</math> Leonis.</i>						
Mar. 14	M	4 F	+1.4	-16.5	-14.4	Star-line dark, very broad and ill defined at edges; displacement evidently small.
<i><math>\delta</math> Ursæ Majoris.</i>						
Aug. 10	M	2 F	+2.1	+30.1	+29.4	Star-line broad and ill defined; observations very difficult.
<i><math>\epsilon</math> Ursæ Majoris.</i>						
Aug. 10	M	4 F	+3.4	-41.7	-41.1	Definition fair; observation difficult.
<i><math>\epsilon</math> Virginis.</i>						
Mar. 11	M	2 $b_1$	-5.1	+7.6	+6.8	Star-line very difficult to see.
Apr. 29	M	2 $b_1$	+9.1	-18.0	-22.5	Star-line faint and difficult to see.
<i>Spica.</i>						
Mar. 14	M	2 F	-8.6	-25.5	-28.1	Star-line faint and very badly defined; measures very rough.
<i><math>\zeta</math> Ursæ Majoris.</i>						
Aug. 10	M	2 F	+4.2	+34.6	+32.9	Both stars observed as one; definition fair.

Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. persec.	Concluded Motion of Star. Meas. E-timed.	Remarks.
<i>η Ursæ Majoris.</i>					
Aug. 10	M	4 F	+ 6.2	+ 14.6 + 15.7	Small displacement towards the red.
<i>α Draconis.</i>					
Aug. 10	M	4 F	+ 2.1	+ 34.9 + 35.0	Star-line broad and diffused at edges.
<i>Arcturus.</i>					
Mar. 11	M	2 $b_1$	- 8.2	- 12.5 - 13.5	Spectrum bright, but tremulous; star-line faint.
14	M	2 F	- 7.5	- 46.7 - 52.8	Star-line faint; definition poor.
Apr. 29	M	2 $b_1$	+ 4.6	- 35.8 - 40.2	Spectrum exceedingly tremulous; definition bad.
May 7	N	2 $b_1$	+ 6.6	- 70.3 - 74.1	Spectrum faint; cloudy.
29	N	3 $b_1$	+ 11.1	- 48.3 - 50.9	Star-line faint; measures difficult.
June 2	N	2 F	+ 11.8	- 36.7 - 35.2	Star-line very faint.
2	N	2 F	+ 11.8	- 42.0 - 43.5	Definition much improved.
18	N	2 F	+ 13.9	- 47.5 - 46.0	Measures considered good.
July 9	M	2 F	+ 15.2	- 52.1 - 43.1	Spectrum tremulous; definition bad.
<i>α Coronæ Borealis.</i>					
July 9	M	2 F	+ 11.7	+ 4.9 - 0.5	Spectrum faint; definition bad.
Aug. 17	M	2 F	+ 12.4	- 11.8 - 12.4	Star-line very broad, but the edges of the line are sharper than in many stars of the type; measures discordant.
<i>ξ Draconis.</i>					
Aug. 10	M	2 F	+ 1.1	- 46.1 - 44.4	Spectrum faint, but steady.
<i>α Ophiuchi.</i>					
June 18	N	2 F	+ 1.8	- 38.4 - 37.9	Displacement towards the blue appeared certain.
July 9	M	2 F	+ 6.6	- 39.9 - 34.6	Spectrum faint; definition poor.
23	N	2 F	+ 9.4	- 30.5 - 32.2	Star-line faint; measures doubtful.
<i>Vega.</i>					
May 29	N	2 F	- 4.8	(- 7.4) (- 6.8)	Measures doubtful.
July 9	M	2 F	+ 0.6	- 32.1 - 28.5	Spectrum bright but tremulous.
Aug. 3	M	2 F	+ 4.0	- 33.9 - 34.9	Definition variable.
5	M	2 F	+ 4.2	- 42.9 - 41.3	Spectrum faint; definition fair.
10	M	2 F	+ 4.8	- 54.6 - 53.0	Star-line very broad and diffused.

Date 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estimd.	Remarks.
Aug. 17	M	2 F	+ 5.6	-26.9 -27.2	Definition good.
25	M	2 F	+ 6.5	-35.5 -37.5	Definition fair.
27	M	2 F	+ 6.6	-19.5 -21.1	Spectrum tremulous.
29	M	2 F	+ 6.8	-38.1 -37.8	Spectrum bright and steady.
Nov. 5	M	4 F	+ 7.7	-34.2 -37.8	Cloudy; definition poor; observation difficult.
17	M	2 F	+ 6.6	-38.8 -53.2	Spectrum bright, but very unsteady.
18	N	2 F	+ 6.5	-44.3 -43.4	

*ζ Aquilæ.*

Nov. 17	M	4 F	+ 12.0	-25.0 -23.7	Spectrum very faint and tremulous; measures very difficult.
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*Altair.*

July 9	M	2 F	- 3.3	-45.0 -38.6	Spectrum fairly steady.
23	N	2 F	+ 0.3	- 4.7 - 4.9	Star-line broad.
Aug. 3	M	2 F	+ 3.2	-50.6 -40.3	Spectrum faint; observa- tion difficult; large dis- placement towards the blue.
25	M	2 F	+ 8.5	-50.1 -49.8	Definition fair.
29	M	2 F	+ 9.4	-36.0 -38.3	Cloudy; spectrum steady.
Nov. 17	M	2 F	+ 14.8	-73.6 -64.3	Spectrum very tremulous.
18	N	2 F	+ 14.7	-35.5 -35.3	Star-line diffused; mea- sures difficult and doubt- ful.

*γ Cygni.*

Nov. 17	M	2 F	+ 10.2	-11.7 -12.0	Spectrum fairly steady; definition good.
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*α Cygni.*

July 9	M	2 F	- 6.4	-35.4 -29.0	Spectrum steady; defini- tion good.
Aug. 25	M	2 F	- 0.1	-30.5 -33.0	Spectrum steady; defini- tion fair.
Sept. 26	M	2 $b_1$	+ 4.6	-67.7 -68.2	Spectrum very tremulous; definition bad.
Nov. 17	M	2 F	+ 9.3	-40.9 -40.4	Spectrum steady; defini- tion good.
18	N	2 F	+ 9.4	-40.6 -40.2	

*ε Cygni.*

Nov. 17	M	5 F	+ 12.2	+ 7.1 + 2.3	Spectrum steady; star-line faint.
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*α Cephei.*

Aug. 25	M	2 F	- 4.0	-17.3 -20.8	Spectrum faint, but steady; measures difficult.
Nov. 17	M	2 F	+ 4.7	-33.0 -40.1	Spectrum steady; defini- tion fair.



Date. 1885.	Obs.	No. of Line. Meas.	Earth's Motion in M. per sec.	Concluded Motion of Star. Meas. Estimd.	Remarks.
<i><math>\beta</math> Pegasi.</i>					
Oct. 5	M	2 $b_1$	+ 4.1	-31.9 -30.6	Spectrum bright, but tremulous; the $b_1$ lines could not be isolated from the shaded band in which they lie.
<i><math>\alpha</math> Pegasi.</i>					
July 23	N	2 F	-13.0	-18.5 -20.4	Spectrum faint; star-line indistinct; measures doubtful.
Aug. 25	M	2 F	- 5.5	+ 8.8 + 7.3	Spectrum faint, but steady; definition fair.
Nov. 17	M	2 F	+15.9	-23.7 -28.6	Definition fair.
Dec. 15	N	2 F	+17.9	- 3.6 - 5.7	Star-line broad and dark.

*Moon.*

Date.	Obs.	No. of Meas.	Line.	Motion Measured.	Remarks.
Feb. 3	M	5	F	- 3.1	
19	M	5	F	-11.6	Measures discordant.
21	M	5	F	-10.3	Coincidence appeared perfect; measures discordant
23	M	5	$b_1$	- 2.1	Coincidence appeared perfect.
25	M	5	$b_1$	- 3.5	Coincidence appeared perfect.
Mar. 27	N	4	F	- 1.1	
Apr. 21	M	5	$b_1$	- 1.6	
29	M	5	$b_1$	- 1.6	Coincidence appeared perfect.
May 29	N	4	$b_1$	- 2.0	Coincidence appeared perfect.
July 23	N	4	F	+ 2.6	Coincidence appeared perfect.
Aug. 25	M	5	F	- 4.1	Coincidence appeared perfect.
Nov. 17	M	5	F	- 2.8	Coincidence appeared perfect.
18	N	4	F	- 1.5	Coincidence appeared perfect.
Dec. 15	N	4	F	+ 1.4	Coincidence appeared perfect.

*Sun.*

Nov. 6	M	5	F	- 0.4	
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*Venus.*

Oct. 16	M	15	$b_1$	-14.0 -7.8	Computed Motion -7.4.
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*Rotation of Jupiter.*Displacement between the  $p$  and  $f$  limbs.

Apr. 21	M	5	$b_1$	$p-f$ +31.6	Position Circle Reading $207^\circ 30'$ ; slit tangential to the planet's limb, the outer edge of the slit being placed exactly on the limb; cylindrical lens before the slit.
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Date.	Obs.	No. of Meas.	Line.	Motion Measured.	Remarks.
Apr. 21	M	5	$b_1$	+ 20.4	Position Circle Reading $117^\circ 30'$ ; slit radial; no cylindrical lens.
27	M	2	$b_1$	+ 28.8	{ Position Circle Reading $207^\circ 30'$ ; slit tangential, the outer edge of the slit being placed exactly on the limb; cylindrical lens before the slit.
29	M	3	$b_1$	+ 17.2	
29	M	3	$b_1$	+ 30.7	Position Circle Reading $27^\circ 30'$ ; slit tangential; cylindrical lens before the slit.

Displacement between the  $n$  and  $s$  limbs.

$n-s$ .					
Apr. 29	M	3	$b_1$	- 0.4	Position Circle Reading $117^\circ 30'$ .
29	M	3	$b_1$	- 2.0	Position Circle Reading $297^\circ 30'$ ; slit tangential at both positions, the outer edge of the slit being placed exactly on the limb; cylindrical lens before slit.

Computed relative motion of the  $p$  and  $f$  limbs 30.9 miles per second, the equatorial diameter of *Jupiter* being taken as 88,000 miles, and its period of rotation as  $9^h 56^m$ .

#### *Rotation of Saturn's Rings.*

Displacement between the  $p$  and  $f$  ansæ.

$p-f$ .					
Apr. 21	M	10	$b_1$	+ 26.7	Position Circle Reading $180^\circ 0'$ ; the inner edge of the slit was placed on the Cassinian division. Lines very faint and difficult to see. It was not found possible to observe the relative displacement of lines from the $p$ and $f$ limbs of the planet.

Computed Relative motion of the ansæ 19.4 miles per second, the diameter of the outer ring being taken as 170,000 miles, and the point observed being assumed to be  $1''.5$  from the extremity of the major axis of the ring.

Observations of Occultations of Stars and Uranus by the Moon, and of Phenomena of Jupiter's Satellites, made at the Royal Observatory, Greenwich, in the year 1885.

(Communicated by the Astronomer Royal.)

Occultations of Stars and Uranus by the Moon.

Day of Obs.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation.		Observer.
					h	m s	
1885, Feb. 20 (a)	Disapp.	Simms' Eq.	220	Dark	7 40	37.53	H. T.
	"	Altaz	100	"	7 40	37.57	A. D.
	"	E. Eq.	70	"	7 40	37.59	H.
	"	Altaz	100	"	11 2	21.94	H. T.
	"	E. Eq.	140	"	11 2	21.54	T.
Mar. 22	W. B. (2) V. 445	Simms' Eq.	220	"	6 48	38.77	H. T.
	"	"	"	"	6 51	33.07	"
	"	Altaz	100	"	6 51	32.54	T.
	"	E. Eq.	210	"	6 51	32.44	H.
	"	Lassell Refl.	250	"	9 2	33.95	W. C.
	"	Simms' Eq.	220	"	9 2	34.37	H. T.
	"	Altaz	100	"	9 2	34.01	T.
	B. F. 1464	Lassell Refl.	250	"	10 23	28.61	H. T.
	B. F. 1464	Simms' Eq.	220	"	10 23	28.15	C.
	"	Altaz	100	"	11 36	26.08	H. T.
27	43 Leonis	Simms' Eq.	220	"	11 36	25.72	C.
	"	E. Eq.	210	"	11 36	25.98	A. D.
	"	"	"	"	"	"	"